

IN THE CLAIMS:

1-49. (cancelled)

50. (currently amended) A method for control of an electrophotographic printer or copier, comprising the steps of:

determining information that refer to a single sheet from print data supplied to the printer or copier;

dependent on said information, determining a transport path of the single sheet through the printer or copier to generate at least one print image on at least one side of the sheet;

providing a system time of the printer or copier that is the same for at least first and second control units of the printer or copier; and

establishing at least one desired point in time at or until which at least one sensor signal generated from a sensor is expected or at least one actuator is expected to be activated dependent on the transport path, said desired point in time ~~referring to~~ being referenced to said system time of the printer or copier.

51. (previously presented) A method according to claim 50 wherein the system time is predetermined by a timer with help of a counter that counts a clock signal with a constant frequency.

52. (currently amended) A method according to claim 50 wherein the desired point in time ~~determines the~~ is a point in time at which an edge of the single sheet should arrive at the sensor generating said sensor signal at a latest.

53. (previously presented) A method according to claim 52 wherein the sensor comprises a light barrier or a swing arm switch by which a sensor signal is output upon arrival of a sheet edge.

54. (currently amended) A method according to claim 50 wherein the sensor generating said sensor signal comprises a feedback device of an actuator by which [[a]] said sensor signal is output upon said actuator reaching a predetermined actuator position.

55. (previously presented) A method according to claim 50 wherein the desired point in time determines a point in time at which the actuator is activated by a control unit of the printer or copier.

56. (previously presented) A method according to claim 55 wherein the actuator comprises a step motor or a valve.

57. (previously presented) A method according to claim 50 wherein a plurality of sensors and a plurality of actuators are provided in the printer or copier, a first part of the sensors or actuators are connected with the first control unit and a second part of the sensors or actuators are connected with the second control unit.

58. (previously presented) A method according to claim 50 wherein the control units have a same time normal.

59. (previously presented) A method according to claim 50 wherein a synchronization signal via which internal time control units of the control units are synchronized is supplied to the control units.

60. (currently amended) A method according to claim 50 wherein a sensor calculation process is associated with the sensor whereby said desired point in time

is calculated or an actuator calculation process is associated with the actuator whereby said desired point in time is calculated in the control units.

61. (previously presented) A method according to claim 60 wherein at least two sensors and at least two actuators are provided, whereby a sensor calculation process is associated in the control unit with each sensor for monitoring and evaluation of the sensors, and an actuator calculation process is associated in the control unit with each actuator for activation of the actuators.

62. (previously presented) A method according to claim 60 wherein a time control calculation process is provided in the control unit via which the desired points in time are compared with a real point in time, and via which a signal is output upon reaching or exceeding the desired point in time.

63. (previously presented) A method according to claim 62 wherein at least two desired points in time are compared with the real point in time upon implementation of the time control calculation process.

64. (currently amended) A method according to claim 57 wherein a same computer program element is respectively invoked and executed as a separate calculation process for monitoring or for evaluation of at least two sensor signals, the computer program elements being invoked or executed with different initial values or different parameters.

65. (previously presented) A method according to claim 64 wherein the calculation processes are executed in parallel by at least one of the control units.

66. (previously presented) A method according to claim 64 wherein the calculation processes are executed by a controller as tasks in a multitasking operation.

67. (previously presented) A method according to claim 64 wherein a timeslot is associated with each calculation process, the calculation processes being executed by a controller in succession in the timeslots.

68. (previously presented) A method according to claim 64 wherein an operating system of a controller controls execution of the calculation processes.

69. (previously presented) A method according to claim 50 wherein a plurality of desired points in time are stored in a storage of a time controller and the desired points in time are compared by the time controller with a real point in time, a signal being output by the time controller upon reaching or exceeding at least one desired point in time.

70. (currently amended) A method according to claim 69 wherein the signal comprises an interrupt signal to start a routine.

71. (previously presented) A method according to claim 69 wherein the desired points in time are sorted in the storage according to their temporal sequence, only temporally next desired points in time being compared with the real point in time.

72. (currently amended) A device for control of an electrophotographic printer or copier, comprising:

at least first and second control units, a time of the printer or copier being provided that is the same at least for the two control units;

at least one of the control units determining information that refer to a single sheet from print data that are supplied to the printer or copier;

at least one of the control units determining from said information a transport path of the single sheet through the printer or copier for generation of at least one print image on at least one side of the single sheet; and

at least one of the control units, dependent on the transport path, establishing at least one desired point in time at or until which at least one sensor signal generated by a sensor is to be expected or at least one actuator is to be activated, the desired point in time ~~referring~~ being referenced to a system time of the printer or copier.

73. (withdrawn) A method for control of an electrophotographic printer or copier, comprising the steps of:

selecting a transport path for printing of a single sheet from at least first, second, and third different transport paths;

in a first operating mode, supplying single sheets to be printed on the first transport path to a first printing group and to a second printing group, a print image being generated on a front side of a first sheet with aid of the first printing group and a print image being generated on a back side of the same single sheet with aid of the second printing group;

in a second operating mode, alternately supplying a plurality of single sheets to be printed in succession on the second transport path to the first printing group or on the third transport path to the second printing group, a print image being generated on a front side of a single sheet with aid of the first printing group and a print image being generated on a front side of a further single sheet with aid of the second printing group;

after the printing of the single sheet in the first operating mode, checking whether at least a preset number of successive single sheets are only to be printed on the front side, and in which, given an under-run of a preset number, the sheets to be printed one-sided in the first operating mode are supplied on the first transport path to the first printing group and to the second printing group, respectively one print image being generated on the front side of the sheets to be printed one-sided with aid of the first printing group and respectively no print image being generated on the back side of the sheets to be printed one-sided with aid of the second printing group.

74. (withdrawn) A method according to claim 73 wherein the preset number is set to a value in a range between 5 and 50 sheets.

75. (withdrawn) A method according to claim 73 wherein the sheets are turned on the first transport path between the first printing group and the second printing group.

76. (withdrawn) A method according to claim 73 wherein the print data of at least the preset number of sheets are stored in a storage of the printer or copier.

77. (withdrawn) A method according to claim 73 wherein a preset first separation between successive sheets to be printed is generated in the first operating mode, and a preset second separation between successive sheets to be printed is generated in the second operating mode.

78. (withdrawn) A method according to claim 77 wherein given a change from the first operating mode to the second operating mode, a preset third separation is generated between a last sheet printed in the first operating mode and

a first sheet printed in the second operating mode, the third separation being larger than the first or second separation.

79. (withdrawn) A method according to claim 77 wherein given a change from the second operating mode to the first operating mode, a preset fourth separation is generated between the last sheet printed in the second operating mode and the first sheet printed in the first operating mode, the fourth separation being larger than the first or second separation.

80. (withdrawn) A method according to claim 73 wherein given a one-sided printing of sheets in the first operating mode, only one printing group generates a print image on the front side of the sheet, and the other printing group generates no print image or generates a non-inked print image on the back side of the sheet.

81. (withdrawn) A method according to claim 73 wherein in the second operating mode, due to different transport paths a first sheet is supplied to the printer or copier from an input tray before a second sheet, the second sheet being output into an output tray of the printer or copier before the first sheet.

82. (withdrawn) A method according to claim 73 wherein the first operating mode comprises a duplex operating mode, and the second operating mode comprises a fast simplex operating mode with increased throughput of sheets, in which sheets are alternately supplied to both printing groups over the first transport path or the second transport path via a gate in an input section.

83. (withdrawn) An electrophotographic printer or copier, comprising:

at least one control unit that selects a transport path from at least first, second, and third different transport paths for printing of a single sheet;

in a first operating mode, the control unit supplies single sheets to be printed to a first printing group and to a second printing group on the first transport path, a print image being generated on a front side of a first sheet with aid of the first printing group and a print image being generated on a back side of the same single sheet with aid of the second printing group;

in a second operating mode, the control unit supplies a plurality of single sheets to be printed in succession to the first printing group on the second transport path or to the second printing group on the third transport path, a print image being generated on the front side of a single sheet with aid of the first printing group and a print image being generated on the front side of a further single sheet with aid of the second printing group;

after the printing of a single sheet in the first operating mode, the control unit checks whether at least a preset number of successive single sheets are only to be printed on the front side; and

given an under-run of the preset number, the control unit supplies sheets to be printed one-sided in the first operating mode to the first printing group and to the second printing group on the first transport path, the first printing group respectively generating a print image on the front side of the sheets to be printed one-sided and the second printing group respectively generating no image on the back side of the sheets to be printed one-sided.

84. (withdrawn) A method for control of an electrophotographic printer or copier, comprising the steps of:

printing single sheets by at least one printing group, the sheets being transported on at least one transport path through the printer or copier and being supplied to the printing group;

determining an arrival time of a first single sheet at a sensor as a first real point in time and comparing it with a first desired point in time, a transport speed of the first sheet being increased, reduced, or maintained on a part of the transport path dependent on a deviation of the first real point in time from the first desired point in time; and

determining an arrival time of a second single sheet at the sensor as a second real point in time and comparing it with a second desired point in time, a transport speed of the second sheet being increased, reduced, or maintained on a part of the transport path dependent on a deviation of the second real point in time from the second desired point in time.

85. (withdrawn) A method for control of an electrophotographic printer or copier, comprising the steps of:

printing single sheets at least one printing group, the sheets being transported on at least one transport path through the printer or copier and being supplied to the printing group;

determining an arrival time of a first single sheet at a sensor as a first real point in time and comparing it with a first desired point in time, a control point in time for changing a transport speed of the first sheet from a first transport speed to a second transport speed being determined dependent on a deviation of the first real point in time from the first desired point in time; and

determining an arrival time of a second single sheet at a sensor as a second real point in time and comparing it with a second desired point in time, a control point in time for changing the transport speed of the second sheet from a first transport speed to a second transport speed being determined dependent on a deviation of the second real point in time from the second desired point in time.

86. (withdrawn) A method according to claim 85 wherein information that refer to a single sheet are determined from print data supplied to the printer or copier.

87. (withdrawn) A method according to claim 86 wherein actuators are provided in the printer or copier, the control points in time being determined for at least one part of the actuators dependent on a paper format to be printed, or sensors are provided in the printer or copier so that desired points in time are determined for at least one part of the sensor signals dependent on the paper format to be printed.

88. (withdrawn) A method according to claim 87 wherein the first desired point in time specifies an arrival of a sheet edge of the first sheet at a first sensor.

89. (withdrawn) A method according to claim 88 wherein a leading sheet edge or trailing sheet edge is detected by the sensor and subsequently evaluated.

90. (withdrawn) A method according to claim 85 wherein a plurality of control units are provided in the printer or copier, at least one first control unit determining the control points in time or the desired points in time, at least one second control unit activates the actuators or sensors, and the first control unit and the second control unit having a common system clock for temporal synchronization.

91. (withdrawn) A method according to claim 85 wherein a sheet separation between a trailing edge of the first sheet and a leading edge of the second sheet is

established by a time difference between the first desired point in time and the second desired point in time.

92. (withdrawn) A method according to claim 85 wherein a first sensor is arranged after a first feed tray and a second sensor is arranged after a second feed tray.

93. (withdrawn) A method according to claim 92 wherein arrival points in time of all sheets extracted from the first feed tray are respectively detected at the first sensor, and arrival points in time of all sheets extracted from the first feed tray are respectively detected at the first sensor.

94. (withdrawn) A method according to claim 92 wherein a third sensor is provided to which is supplied all sheets supplied to the printing group, a correct sheet position being checked, the third sensor determining an arrival time of each sheet as a third real point in time and comparing it with a predetermined third desired point in time, and a change of the transport speed is adapted for subsequent sheets given a deviation of the arrival point in time from the desired point in time at the first or at the second sensor.

95. (withdrawn) A method according to claim 85 wherein the method is implemented before the sheets are supplied in front of a printing group or immediately before the sheets are output from the printer or copier.

96. (withdrawn) A device for control of an electrophotographic printer or copier, comprising:

a measurement device that determines as a first real point in time an arrival point in time at a sensor of a first single sheet transported by a transport device;

at least one control unit that compares the first real point in time with a first desired point in time and controls a transport speed of the first sheet in a region after the sensor;

the control unit increases, reduces, or maintains the transport speed of the first sheet dependent on a deviation of the first real point in time from the first desired point in time, at least at one part of the region;

the measurement device determining as a second real point in time an arrival point in time at the sensor of a second single sheet transported by the transport device; and

the control unit comparing the second real point in time with a second desired point in time and controlling a transport speed of the second sheet in a region after the sensor.

97. (withdrawn) A device according to claim 96 wherein the control unit increases, reduces, or maintains the transport speed of the second sheet at least at a part of the region, dependent on a deviation of the second real point in time from the second desired point in time.

98. (withdrawn) A device according to claim 96 wherein dependent on a deviation of the second real point in time from the second desired point in time, the control unit determines a control point in time for changing the transport speed from a first transport speed to a second transport speed.

99. (withdrawn and currently amended) A method for control of an electrophotographic printer or copier, comprising the steps of:

determining information that refer to a single sheet from print data supplied to the printer or copier;

dependent on said information, determining a transport path of the single sheet through the printer or copier to generate at least one print image on at least one side of the sheet;

providing a system time of the printer or copier that is independent of the transport path of the individual sheet; and

establishing at least one desired point in time at or until which at least one sensor signal generated by a sensor is expected or at least one actuator is activated dependent on the transport path, said desired point in time ~~referring~~ being referenced to said system time of the printer or copier.

100. (withdrawn and currently amended) A device for control of an electrophotographic printer or copier, comprising:

at least one control unit, and wherein a system time of the printer or copier is independent of a transport path of a single sheet;

the at least one control unit determining information that refer to the single sheet from print data supplied to the printer or copier;

the at least one control unit determining from said information the transport path of the single sheet through the printer or copier for generation of at least one print image on at least one side of the single sheet; and

the at least one control unit, dependent on the transport path, establishing at least one desired point in time at or until which at least one sensor signal is to be expected or at least one actuator is to be activated, the desired point in time ~~referring~~ being referenced to the system time of the printer or copier.